

REMARKS

Favorable reconsideration of the present application is respectfully requested.

Claims 1-8 are presented for examination in this application. Claims 1 and 7 have been amended to correct typographical errors and to emphasize that the formation of resolution increasing new dots only occurs when the exposure intensity exceeds 50% of a maximum value where the overlap between adjacent light fluxes is centered (see page 20, lines 5-7 of the specification, for example), all without the introduction of any new matter.

The outstanding Office Action includes a rejection of Claims 1-8 under 35 U.S.C. §103(a) as being unpatentable over Frazier et al (U.S. Patent No. 5,193,008, Frazier) in view of Itoh et al (U.S. Patent No. 5,412,408, Itoh).

Before discussing the outstanding rejection of Claims 1-8 over Frazier in view of Itoh, it is believed that a brief review of the present invention would again be helpful. In this regard, the present invention is directed to an image forming apparatus providing light fluxes overlapped in a sub-scan direction of the apparatus so as to form a central dot on a photosensitive layer when the exposure intensity exceeds 50% of a maximum value where the overlap between adjacent light fluxes is centered. The overlapped light fluxes are provided with a beam spot diameter W_s defined by $1/e^2$ of the maximum value in the exposure distribution of the light flux, such that a ratio between W_s and an interval L between adjacent scan lines satisfies the formula $1.2 < W_s/L < 4.5$ to thereby form the central new dot between adjacent scan lines in a manner that stabilizes the formed dots to increase resolution in the sub-scan direction as discussed on line 8 of page 7 through line 5 of page 8 of the specification, for example.

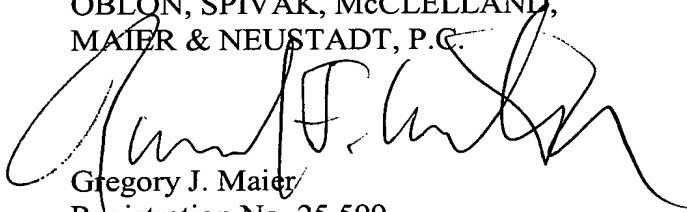
The outstanding rejection of Claims 1-8 over Frazier in view of Itoh is traversed because neither Frazier nor Itoh, considered alone or together in any proper combination,

teaches or suggests that new dots are formed centered between adjacent light fluxes when an exposure intensity exceeds 50% of a maximum value there in a manner to increase resolution in the sub-scan direction. As independent base Claims 1 and 7 require the formation of such centered new dots, and as Claims 2-6 and 8 depend from these independent base claims, the patentability of Claims 1-8 is clearly established over Frazier in view of Itoh.

As no further issues are believed to remain outstanding relative to this application, it is respectfully submitted that this application is clearly in condition for formal allowance, and an early and favorable action to that effect is, therefore, respectfully requested.

Respectfully submitted,

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IN THE TITLE

Please amend the title to read as follows:

--IMAGE FORMING APPARATUS WITH OVERLAPPED [NON-CIRCULAR
BEAM SPOTS] LIGHT FLUXES FORMING A DOT--

IN THE CLAIMS

Please amend the claims as follows:

--1. (Amended) An image forming apparatus, comprising:

a photosensitive body; and

an optical scanning device having a deflector deflecting a light flux emitted from a light source, and scanning [the] a surface of said photosensitive body by the thus-deflected light flux,

wherein said apparatus is configured such that [all dots forming parts of images formed on the surface of the photosensitive body] new dots are formed [at a center] centered between adjacent light fluxes [as a result of the adjacent light fluxes being overlapped with one another in a sub-scan direction] when an exposure intensity exceeds 50% of a maximum value there, and

wherein a ratio of a static beam-spot diameter W_s in [the] a sub-scan direction on the surface of said photosensitive body defined by $1/e^2$ of [the] a maximum value in [the] an

exposure distribution of the beam spot to an interval L between adjacent scan lines satisfies the following formula:

$$1.2 < Ws/L < 4.5$$

to thereby form said new dots between adjacent scan lines in a manner to increase resolution in the sub-scan direction.

7. (Amended) An image forming apparatus, comprising:
a photosensitive means and
an optical scanning device having a deflecting means for deflecting a light flux emitted by light emitting means, and scanning [the] a surface of said photosensitive [body] means by the thus-deflected light flux,

wherein [all dots forming parts of images formed on the photosensitive layer of the photosensitive body] new dots are formed [at a center] centered between adjacent light fluxes [as a result of the adjacent light fluxes being overlapped with one another in a sub-scan direction] when an exposure intensity exceeds 50% of a maximum value there, and

wherein a ratio of a static beam-spot diameter Ws in [the] a sub-scan direction on [the] a surface of said photosensitive [body] means defined by $1/e^2$ of [the] a maximum value in [the] an exposure distribution of the beam spot to an interval L between adjacent scan lines satisfies the following formula:

$$1.2 < Ws/L < 4.5$$

to thereby form said new dots between adjacent scan lines in a manner to increase resolution in the sub-scan direction.--